

PUBLIC SERVICE COMMISSION OF WISCONSIN

INFORMATION REQUIREMENTS FOR ELECTRIC GENERATION CONSTRUCTION PROJECTS OVER 100 MW Version 11/19/2001

A generation project of 100 megawatts (MW) or greater requires a Certificate of Public Convenience and Necessity (CPCN) application. **This document describes the basic information and format required for the Commission to review a CPCN application and to prepare either an Environmental Impact Statement (EIS) or an Environmental Assessment (EA).** Prospective power plant developers should make sure that they are using the most recently updated version of the CPCN requirements (reflected by the date above) as changes are made on a periodic basis. There may be additional information that will be required by Commission staff or Department of Natural Resources (DNR) staff in cases where a joint environmental document is prepared. It is essential that prospective developers schedule a joint meeting with staff of both agencies prior to filing a CPCN application with the Commission.

If a generation project requires additional electric transmission and/or natural gas pipeline, a completed application containing the information in Part 5.00 and/or Part 6.00 must be filed at the same time as the application for the generation project. This may mean that three different companies have to submit applications for their particular parts of the project. Because the Commission must review and take final action on a proposal within 180 days, following a 30-day application completeness review, it is important that all applications are filed at the same time. Missing information must be provided before the applications are deemed complete. The information is divided into three sections:

- ✍ Information requirements for construction of an electric generation facility over 100 MW (Parts 1.00 - 4.00);
- ✍ Information requirements for electric transmission lines and substations (Part 5.00); and
- ✍ Information requirements for a natural gas pipeline to serve a proposed generation facility (Part 6.00). If there are other underground facilities associated with the project, e.g. steam lines, water supply lines, wastewater discharge lines, sanitary sewer lines, use the requirements in Part 6.00 as a guide.

In addition to hard copies, the applicant should provide disks with text in Microsoft Word. Commission staff works in Word 2002. In addition to hard copies of maps and graphics, digital versions must be submitted (see below). Additionally, the PSC requires applicants to minimize the bulk of their applications by eliminating superfluous information and bulk information not material to the case. The following examples should be used as a guide:

- 1) When submitting required information such as local ordinances, land use plans or other local and county planning documents, only submit those pages relevant to the information requirement, i.e. pages specific to land use or noise. If Commission staff is interested in having the entire document for context, the PSC would require the applicant to file one copy under a separate cover.
- 2) Duplicative information should be minimized in an application. For example, if certain information, such as a Developer's Agreement, is applicable to more than one area of the CPCN application, include the entire document as an Appendix and reference it in the application text.

- 3) When submitting correspondence between the applicant and state, local and federal government permitting agencies, submit only copies of “official” correspondence, i.e. letters from the applicant to an agency and the agency response to the applicant. Commission staff needs to track this correspondence to verify that the applicant has applied for permits and the status of the permit review. Do not include unofficial minutes of meetings or records of telephone conversations between the applicant/applicant’s consultant and permitting agencies as these documents represent hearsay and are not considered factual information.
- 4) Applications should be submitted with double-sided printed pages. This includes the text of the application as well as copies of supporting documentation submitted in the application. Exceptions to this requirement are large maps and figures (sized larger than 8 1/2 x 11 inches).

Important notes on digital forms of graphics:

- All required maps and other graphics must be supplied in both hard copy and digital formats.
- Line drawings must be in AutoCad *.dwg format or *.dxf format (check with Commission staff for the appropriate AutoCAD release). The preference is *.dwg.
- If Geographic Information Systems (GIS) data files are used, submit GIS data files in Shapefile format (ESRI ArcView). All GIS data submitted must be projected to Wisconsin Transverse Mercator (WTM), a projection system unique to Wisconsin and used by Wisconsin agencies. The WTM uses North American Datum (NAD) 83/91. The WTM projections are:

Projection	Transverse Mercator
Spheroid	GRS80
Scale Factor at Central Meridian	0.9996
Longitude of Central Meridian	90° W (-90°)
Latitude of Origin	0°
False Easting	520,000
False Northing	-4,480,000
Unit	meter

- Photographic images of the existing landscape and renderings of proposed facilities on the existing landscape must be submitted in a high-resolution uncompressed *.tif format (preferred) or high-resolution *.jpg format.
- Scanned documents which cannot be submitted in any other format must be submitted in *.gif format at a depth of 256 colors or less.
- When providing maps, note facility locations but do not obscure map details.

Direct questions concerning these information requirements to Kenneth C. Rineer of the Commission staff, at (608) 267-1201, e-mail kenneth.rineer@psc.state.wi.us.

Parts 1.00-4.00 - Information Requirements for Construction of an Electric Generation Facility over 100 MW

A generation facility of 100 MW or greater requires an application for a Certificate of Public Convenience and Necessity (CPCN). **A complete CPCN application must contain the following information and must be formatted as follows, or a showing must be made as to why the information is not applicable.**

The Commission must evaluate and consider alternative sites whether a proposed electric generating facility is utility owned or a wholesale merchant plant (as defined in Wis. Stat. § 196.49 (1) (w)). Therefore, provide comparable information about at least two sites for the proposed project and a sound justification for their selection.

1.00. PROJECT DESCRIPTION AND OVERVIEW

- 1.01. Entity that would own the plant and entity that would operate the plant.
- 1.02. Type of power plant proposed (technology and components required) including any planned additions, possible expansions or changes now or in the future.
- 1.03. Auxiliary facilities needed including any steam lines and means of fuel transport and storage (e.g. oil tank).
- 1.04. Identify electric transmission and natural gas interconnections needed.
- 1.05. Potential secondary development resulting from the project, including the long-term potential as well as any short-term plans for future steam customers.
- 1.06. Describe the siting process and a sound justification for the selection of the sites.
- 1.07. Power plant's projected life span.
- 1.08. Scale drawing of the plant. A photo simulation is desirable. Indicate the plant dimensions. *(Please consult with staff before moving forward on photo simulations, to avoid unnecessary work or misdirection.)*
- 1.09. The purpose of or need for the project with supporting data, including an energy efficiency analysis. (Need analysis not required for merchant plants.)
 - a. Monthly demand and energy forecast for peak and off peak periods over the next 20-25 years.
 - b. Describe the 25-year optimal generation expansion plan via EGEAS for all of the entities that are part of the generation plan.
 - c. Describe how the availability of purchase power was analyzed.

- d. Identify plant retirements forecast over the next 20-25 years.
 - e. Describe how the existing and expected applications for generation from IPPs have been factored into your forecast.
 - f. Describe the impact of an application to extend the license at nuclear power plant facilities in Wisconsin.
- 1.10. Identify supply alternatives considered in lieu of this proposal (including a “no-build” option,) and justification for the choice of the proposed option(s). If the project is not a cogeneration project, explain why it is not. (Not required for merchant plants)

This discussion must also consider Wisconsin’s Energy Priorities listed under Wis. Stat. § 1.12 (4). Specifically, Wis. Stat. § 196.025 requires the Commission to consider these priorities, in the order listed, in making all energy-related decisions to the extent that they are cost-effective, technically feasible and environmentally sound. Provide analyses that examine the proposed project’s: (1) cost-effectiveness, (2) technical feasibility, and (3) environmental compatibility with respect to the following energy priorities. (Not required for merchant plants)

- a. Energy conservation and efficiency.
 - b. Noncombustible renewable energy resources.
 - c. Combustible renewable energy resources.
 - d. Nonrenewable combustible energy resources, in the order listed:
 - i. Natural gas.
 - ii. Oil or coal with a sulphur content of less than 1 percent.
 - iii. All other carbon-based fuels.
- 1.11. Cost – capital cost of the completed facility and all related facilities. (Not required for merchant plants.)
- a. Construction cost of facilities.
 - b. Describe and provide the complete terms and conditions of any lease arrangements.
 - c. Identify what air emission technologies are factored into the cost.
 - d. Identify/justify the costs used for the purchase power forecast.

- e. Identify/justify the fuel forecasts used over the 20-25 year study period (\$/MBTU, coal, gas, oil).
 - f. Identify the affiliated interest approvals required for each unit.
 - g. Provide a statement demonstrating that the conditions of Wis. Stat. § 196.52(9)(a)3(b) have been met.
 - h. Describe the effect on wholesale market competition.
 - i. Discuss and provide the comparative costs of the alternatives identified and evaluated in 1.10.
 - j. Identify the cost of the proposed project compared to a rate-based proposal or competitive bids received.
- 1.12. Workforce size and skills required for plant construction and operation. Expected source of work force for construction and operation.
- 1.13. Expected hours of operation and output during these hours. Total hours of operation anticipated daily, weekly, seasonally, and annually. Variation in operation during these periods including projected peak times of day and year.
- 1.14. Fuel types (primary and backup), and likely fuel source(s). Fuel quantity to be used, for the following modes, in million Btu per hour:
- Half load operation
 - Rated load operation
 - Maximum capacity operation
- 1.15. Additional items for coal plants: identify the coal source and composition, transportation methods, location and pathway of handling facilities on-site, storage locations (on site or off site) and the location and capacity of waste disposal facilities (on site or off site landfill). Discuss storm water management in detail in section 2.23. Provide a diagram of coal handling, from delivery through storage and end use. Also, provide separate water balance for ash handling and describe any WPDES issues resulting from ash handling water discharges (WPDES discussion can be addressed in section 2.20).
- 1.16. Operating characteristics – heat rate, equivalent availability and capacity factors. Provide heat balances for the following operating modes:
- Rated load operation
 - Maximum capacity operation

Provide water balances for the following operating modes. Include the flow for the cooling tower, evaporative losses, cooling tower blowdown, power augmentation, evaporative coolers, demineralizer usage, steam system blowdown,

potable water, fire protection/control, and other uses. Provide flows in gallons per hour for:

- Half load operation
 - Rated load operation
 - Maximum capacity operation
 - Maximum operation in summer (90°F)
 - Maximum operation at average temperature (44°F)
 - Maximum operation in winter (0°F)
- 1.17. List of required federal, state, and local permits and approvals required and the status of each, including planned application date and contact name and telephone number for permitting agency.
- 1.18. Copies of correspondence to and from permitting agencies that relates to permit approval or compliance approval. Copies of any correspondence to or from local governments. This should continue after submittal of the CPCN application (refer to direction #3 on page 1 of this document).
- 1.19. Estimated schedule for permitting and construction. Include a timeline showing construction activities from beginning of construction to in-service including a breakdown by facility and major component. Discuss what the critical path items are.
- 1.20. Description of major construction activities including any temporary roads or other facilities required during construction.
- 1.21. Hazardous chemicals to be used on site during construction and operation (including liquid fuel), plus spill containment and cleanup measures. Discuss SPCC and Risk Management planning for the chemicals used.

2.00. Natural and Community Resources, Description and Potential Impacts

- 2.01. Map(s) (**Natural Resources**)
- Map showing the location of all sites relative to major geographic features (such as highways, nearest city or large river) so that locations are easily identifiable.
 - Map of the site showing location of proposed facilities.
 - Additional map (if necessary) showing proposed location of any connecting facilities (e.g. electric transmission lines, natural gas pipelines, or steam lines).

All the following maps should extend one half mile from all proposed facilities.

- Plat maps showing land ownership and the proposed facilities.
- USGS topographic maps (1:24,000), plat maps, and original WDNR wetland maps showing the location of project site and connecting facilities without obscuring map details (highlighter works well).

- Map(s) showing existing land use (e.g. agriculture, recreation)/land cover (e.g. forest, grass).
 - Map showing existing zoning within one-half mile from the site.
 - Flood plain maps (Flood Insurance Rate Maps (FIRM)) if the site is within one-half mile of a flood plain.
 - Soil survey map.
 - All current digital land use and zoning GIS data (projected to WTM as noted above) maintained by local units of government in the project area.
- 2.02. Recent (within last three years) aerial photos of site at a scale of 1:4800 or larger. Photos should show one mile beyond the generation site boundaries. Describe any changes to the area since the photos were taken. In a rapidly developing area, air photos may need to be taken more recently than indicated above. Consult with Commission staff regarding age of photos.
- 2.03. Provide township, range, and nearest ¼ ¼ section information for the plant site and all connecting facilities.
- 2.04. History of generation site use, including any possible previous site contamination.
- 2.05. Current land ownership and any activities or plans for temporary or permanent acquisition of lands or rights-of-way from landowners. Include plat maps indicating proposed acquisitions.
- 2.06. Copies of any zoning ordinances affecting the project site and the area within one-half mile of the site boundary (provide only page(s) directly citing ordinance language). Name the entity responsible for zoning changes and describe the process if necessary. If any local governments (within one-half mile) have specific/adopted land-use plans that affect the area of the project, provide a copy. If there are any other local plan documents relevant to the project site (e.g. county recreation plan, farmland preservation plan, highway development plan, and sewer service area plan) provide copies of those as well (see direction #1 on page 1 of this document).
- 2.07. Describe zoning and land use changes proposed to local government for the proposed project and the outcome.
- 2.08. Acreage of each existing land use or land cover present on the site and expected acreage of each land use or land-cover on the site when project is complete. Identify laydown, material storage, and parking areas, and the expected use of these areas after project completion. Describe any plans for post-construction site restoration.
- 2.09. General topography of the site and surrounding area. Describe expected changes to site topography due to grading activities.

- 2.10. Geology of the site and impact on geological formations on the site. Note location of active mines or quarries within one half mile.
- 2.11. Identify soil types on the site and descriptions of the properties of each soil type present. Note expected impacts on soils and where mitigation techniques may be required.
- 2.12. Existing vegetation communities, including notations of prevalent animal and plant species observed during site visits. Information provided should be adequate to characterize the habitat quality of the site accurately. Describe expected impacts.
- 2.13. Documentation of (or lack of) endangered species, threatened species, and Wisconsin species of special concern on the plant site and within one-half mile of the site boundary. Include similar documentation for any connecting facilities. Include a map indicating the location of identified resources (file this map as confidential information). Describe projected impacts.
- 2.14. Documentation of (or lack of) archeological and historical sites on the plant property and within one-half mile of the site boundary. Include documentation for any connecting facilities. Include a map indicating the location of identified sites (file this map as confidential information). Describe projected impacts.
- 2.15. Emissions and discharges.
 - a. Identify assumptions used with respect to emission standards for NO_x, SO₂, and Hg. (For each unit) Identify type of proposed control equipment and indicate whether the equipment is used year-round.
 - b. (For each unit) Total discharge tonnage for each type of pollutant, for periods relevant to state and federal requirements.
 - c. (For each unit) Provide the background concentrations of sulfur dioxide (SO₂) over 3 hours, 24 hours, and 1 year, and of carbon monoxide (CO) for 1 hour and 8 hours.
- 2.16. Discuss methods or plans to control mercury emissions if the proposed plant will burn coal. Include a diagram of the boiler and any pollution controls.
- 2.17. Discuss dust control measures to be used during construction and after. For a coal plant, include discussion of measures to be taken to control fugitive dust emissions from coal storage piles and coal handling and conveyance.
- 2.18. Identify streams in project area and potential impacts on each. Identify streams crossed by connecting facilities. Note specially protected streams and rivers. If a surface water body (river, stream or lake) is to be used for water supply or discharge, see items 2.20, 2.21 and 2.22 below.

- 2.19. Water usage and source - well or municipal water. (For each unit) Report water volume usage in daily, monthly and annual averages. Report consumptive use/net loss of water (e.g. contact or non-contact cooling, plant processes, once through cooling, evaporative cooling etc.). Report number, depth, and capacity of wells for each site. Discuss potential effects on individual or municipal wells, springs, and streams due to water usage. The level of expected impact must be assessed using drawdown models or local groundwater aquifer data.
- 2.20. Water usage and source - surface water body. (For each unit) Report water volume usage in daily, monthly and annual averages. Report consumptive use/net loss of water (e.g. contact or non-contact cooling, plant processes, once through cooling, evaporative cooling etc.). Characterize the biological environment including, but not limited to: fish and invertebrate species and communities present; mammal and bird use in the immediate area; vegetative cover on the shoreline; and presence of endangered and threatened species.
- 2.21. Water usage and discharge – surface water body or municipal. Report water volume discharge in daily, monthly and annual averages. Report chemical and physical attributes of the discharge water including, but not limited to: presence/absence and expected concentration of biocides and metals; expected temperature of discharge water in the mixing zone; and expected variation in temperature and volume on a yearly basis. If discharging to local municipality, identify municipality and agreements to date regarding quantity and quality of discharge water to be treated. Also identify secondary impacts, if any, to municipality (e.g. will municipality require any expansion or upgrades to receive wastewater).
- 2.22. Description of location and construction methods for all pipes extending into any surface water body (length, diameter, and composition). Include screen/structure design at end of pipe. Characterize the physical environment including, but not limited to: width and depth at location of intake and outfall structures; average, maximum and lowest daily flows in cubic feet per second; water quality data in the potentially affected area; and physical modeling of the effects of the expected intake and discharge on biota and bottom sediments. Description of methods proposed for zebra mussel control (if applicable).
- 2.23. Describe any on site wastewater and storm water treatment facilities and identify any wastes generated from such operations. Additionally, describe any process water pretreatment facilities (demineralizers) and solid waste products resulting from water pretreatment.
- 2.24. Describe storm water management plan in the context of local and state regulations. Specifically, discuss the amount of flow it would be designed to handle and the location of the point of discharge. Additionally, describe storm water management plan for coal storage and ash disposal runoff.

(Note: Analyses for water usage and discharge and storm water management, for any planned additions, must include a cumulative impact analyses.)

- 2.25. If the facility would generate solid waste (e.g. coal ash and limestone by-products) as part of the electricity production process, please describe the composition and quantity of waste and how it would be handled.
- 2.26. Information on farm operations, farm renters, presence of drainage tile or irrigation, and farmland preservation agreements for the plant site.
- 2.27. Copies of any local noise ordinances (only page(s) directly citing ordinance language).
- 2.28. Existing and projected noise measurements, based on the Commission's noise protocol. (See PSCW Noise Protocol Requirements)
- 2.29. For a coal plant, compare noise impacts from coal-specific sources;
- noise from coal train couplings when coal cars are being staged and moved for emptying;
 - noise from coal unloading either through bottom dump or rotary car dumper;
 - noise generated from car type, i.e. aluminum versus steel;
 - steam blows for plant start-up.
- 2.30. Site lighting (during construction and on a permanent basis) and its intensity in contrast with the plant's surroundings.
- 2.31. Expected odors.
- 2.32. Potential for road icing or fogging due to operation of the proposed facilities, including specific location and duration. Fogging probability map and plume length map. Mitigation measures contemplated or proposed.
- 2.33. All other environmental mitigation measures proposed (e.g. buffer zone surrounding plant, efforts to control noise beyond standards required by law, other ways in which potential impacts, including aesthetics, are reduced beyond standards required by law).
- 2.34. Map(s) (**Community Resources**)
- Map at community scale showing roads, streets, city or township boundaries, etc.
 - Additional map (if necessary) showing proposed location of any connecting facilities, (e.g. electric transmission lines, or gas pipelines, or steam lines).
 - Map showing site in relation to nearest residences and other buildings, indicating distances to both the site boundary and the plant footprint.
 - Additional map (if necessary) showing proximity to schools, day care centers, hospitals, and nursing homes up to one-half mile from the site.
 - Map of all publicly owned lands within one-half mile of the project site (parks, national/county/state forests, etc).

- 2.35. Table indicating distance (in feet) to schools, day care centers, hospitals, and nursing homes, up to one-half mile from site boundary.
- 2.36. Description of all publicly owned lands within one-half mile of the project site (parks, county forests, etc).
- 2.37. Description of the area within one-half mile of site in terms of population, racial or ethnic composition, and income levels. Provide the same information for the township, county or Standard Metropolitan Statistical Area as a whole.
- 2.38. Services to be provided by the city, town, and/or county during construction and when the plant is in operation (e.g. water, fire, EMS, police, security measures, and traffic control). Specifically, address community and facility readiness for incidents such as fires, boiler implosions/explosions, coal dust explosions and critical piping failures.
- 2.39. Local government infrastructure and facility improvements required (e.g. sewer, water lines, railroad, police, fire).
- 2.40. Effects of project on city, village, town and/or county budget for these items.
- 2.41. Estimate of possible tax revenue to community.
- 2.42. Other benefits to the community (e.g. employment, reduced production costs, goodwill gestures).
- 2.43. Existing facilities that will be retired as a consequence of plant operation (e.g. existing steam plant) and job impact of such retirements.
- 2.44. Routes, types, and frequency of construction traffic.
- 2.45. Potential impacts of construction traffic on the local transportation system: road damage, congestion, rail line usage or interference, and heavy loads or large loads.
- 2.46. Types and frequency of traffic expected on roads and railroads due to plant operation. Describe expected traffic routes.
- 2.47. Permanent changes, if any, to existing roads, railroads, traffic signals, etc.

3.00. ELECTRIC TRANSMISSION SYSTEM

See Part 5.00 of this document for further requirements about effects on the transmission system and required transmission construction work. Part 5.00 also includes a format to use in communicating information related to magnetic fields.

- 3.01. Provide the completed transmission interconnection study report from the transmission provider, including any needed transmission system improvements.

4.00 OTHER

- 4.01. Separate alphabetized lists (names and addresses) in Microsoft Excel or a compatible program for each of the groups described below.
 - Property owners and residents within one-half mile from the proposed power plant site. *Please consult Commission staff to assure that the format and coverage are appropriate considering the project type, surrounding land use, etc.*
 - Public property, such as schools or other government land.
 - Clerks of cities, villages, townships, counties, and Regional Planning Commissions (RPC) directly affected.
- 4.02. “Public outreach” (providing information to the public about this project) efforts to date and any planned public information activities. Provide copies of public outreach mailings.
- 4.03. Future plans for maintaining communication channels with the public (e.g. public advisory board, open houses, suggestion boxes, and newsletters).
- 4.04. Local media that have been informed about the project (include at least one print and one broadcast).